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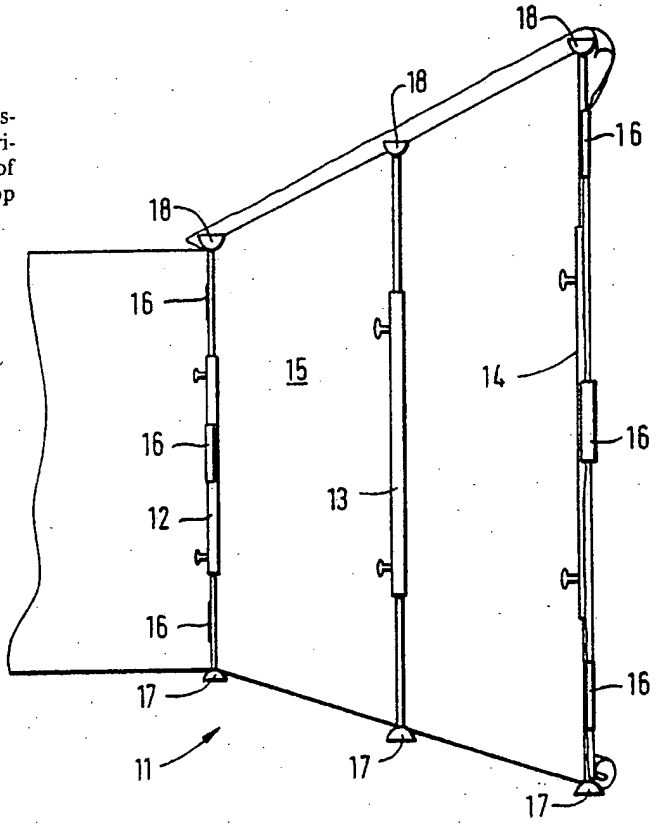
(54) Title: COLLAPSIBLE SCREEN

(57) Abstract

A collapsible screen comprising a pair of telescopic poles (12, 14) and a sheet (15) of flexible material. The sheet (15) is attached to the poles by means of resilient clips (16) the poles (12, 14) have feet at the top and bottom which engage the ceiling and the floor.



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COLLAPSIBLE SCREEN

The invention relates to collapsible screens.

Many different types of screens are in use today in a wide variety of situations. For example dust sheets are used to protect carpets and furniture during painting and decorating in the home; timber screens are used on building sites to protect the passing public from dirt and rubble; cloth screens are used in hospitals to give patients privacy; and there are many other varieties.

The problems with these methods of screening include wastage, in that timber screens tend to be used only once and are then destroyed; inflexibility, in that many are bulky and must be wheeled or carried from one place to another or can only be used in one type of situation; and impracticality, in the case of dust sheets which, when used in a room where building work is being carried out, generally must cover all items in that room making room unusable.

According to the invention there is provided a collapsible screen comprising a pair of elongate support members, a sheet of flexible material and fastenings for releasably attaching the sheet to the support members, characterised in that the support members are telescopically adjustable, have fixing means arranged to fix the support members at a desired length, and have engagement means arranged to engage a supporting structure.

The advantages of such a collapsible screen include increased portability, easier storage, increased flexibility. A screen in accordance with the

are affixed to the top and bottom ends of each support member, thereby constituting engagement means. This helps to prevent damage or marking of the structures supporting the supports. The feet are preferably resilient and may be made of a rubber-like material. Preferably, the feet have a concave engagement region. Rivets may be provided which are passed through the sheet and into a receiving hole in each foot at least those at the top, thereby clamping the sheet to the feet to ensure that the sheet is properly tensioned.

Alternatively, the engagement means might comprise simple end caps, suckers, purpose-built connectors or clamps.

The support members are preferably circular in cross-section though other section may be employed. Examples include square, rectangular and overlapping or nested sections such as right angles or tongue and groove. Any suitable material may be employed such as aluminium alloy, stainless steel, plastics materials etc., with low weight and high strength being the desired qualities. They may be provided with a sheath or coating of a suitable protective material.

The sheet may be fastened to the support members by means of ties. These allow the sheet to be entirely separated from the supports to aid storage or ease of transit. More preferably, however, resilient clips are used. These preferably have a C-shaped cross section and are arranged to surround the support members with the sheet clamped between. The clips may be made of any suitable resilient material. They are advantageous in that they do not require the sheet to have cleats and provide greater adjustability in that the degree to which the sheet is wrapped around the

various ways and one will now be described, by way of example, with reference to the accompanying drawings, in which :-

Figure 1 is a schematic perspective view of an erected screen according to the invention;

Figure 2 is an enlarged exploded diagram of the left hand end of the screen of Figure 1;

Figure 3 is a detail of connection clip in position; and

Figure 4 is an enlarged exploded view of the top of a support member.

Referring to Figure 1 an extensible screen 11 comprises three telescopic poles 12, 13, 14 and a generally rectangular sheet 15 of screening material.

The screening material is a clear reinforced plastics though any suitable material may be used, for example, a cloth dust sheet may be used for building work. The poles 12, 13, 14 are of aluminium alloy and have a protective plastics coating.

The poles are spread apart and the sheet 15 is connected to the end poles 12, 14 by means of clips 16. Each pole has a bottom foot 17 and a top foot 18. The bottom feet 17 engage the floor and the top feet 18 clamp the sheet 15 against a ceiling.

As can be seen in Figure 2 each pole eg. 12 comprises an outer hollow sleeve 19 and an extensible arm 21 which is inserted in to each end. The arms 21 are free to slide smoothly within the sleeve 19. Pole clamps 22 are provided at each end of the sleeve 19 to enable the arms 21 to be locked in a particular position. The pole clamps 22 take the form of a thumb screw 23 passing through a tapped collar 24 and a hole in the sleeve 19 to enlarge the respective arm 21. The

several screens may be used together to form much longer screens either in a straight line with angles other than 180° between adjacent screens. Alternatively a single sheet 15 may be used with a number of poles.

IN an alternative embodiment of the invention, sheets may be used which do not extend the full height of the poles. In this way part screens may be provided. In another embodiment of the invention only one telescopic arm may be provided, or one or more multiply extending arms.

In yet another embodiment, there may be a horizontal hanging rail which extends between the upper ends of two poles. The rail is similar to the poles 12, 13, 14 in having a pair of telescopic arms extensible from a sleeve and pole clamps. Instead of feet, however, there are c-clips which are of a size suitable to clip onto the arms 21 of the poles. The sheet 15 may be tied to the rail to support the upper edge.

It is envisaged that the invention may employ non-rectangular sheets whereby the poles would be positioned other than vertically. Alternatively the poles could be used to extend horizontally between two structures.

6. A screen as claimed in any preceding Claim, characterised in that the fastenings (16) comprise clips arranged to surround the support members (12,14) resiliently, with a portion of the sheet (15) located therebetween.

7. A screen as claimed in any of Claims 1 to 5, characterised in that the fastening means comprise ties arranged to pass through cleats in the sheet.

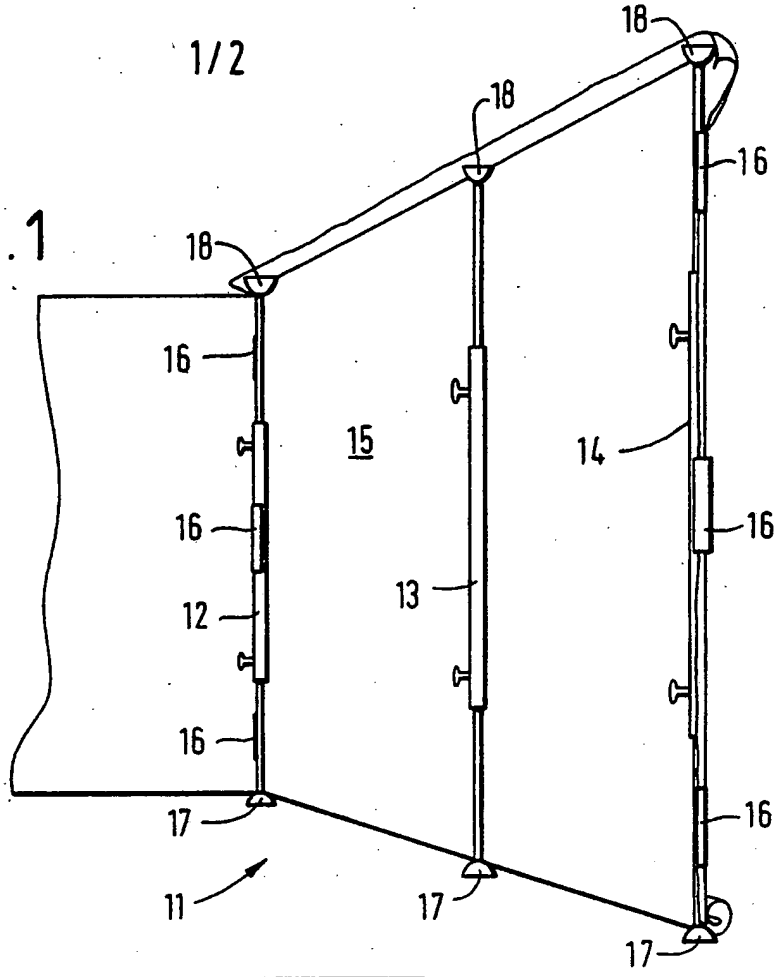
8. A screen as claimed in any preceding Claims , characterised in that the engagement means comprise resilient feet (17,18) at each end of each support member (12,14).

9. A screen as claimed in any preceding Claim, characterised in that one or more extensible transverse members which in use, extend between the support members, the sheet also optionally being fastened to the transverse members, the transverse members optionally being provided with c-clips at each end for fixing to the support members.

10. A collapsible screen as claimed in any preceding Claim, characterised in that it comprises three or more support members (12,13,14) and one or more sheets (15).

11. A method of erecting a collapsible screen as claimed in any preceding Claim, characterised by; fastening an edge portion of the sheet (5) to each of the support members (12,14), locating the support members at positions spaced from each other by the length of the sheet (15) fastened between the,

FIG.1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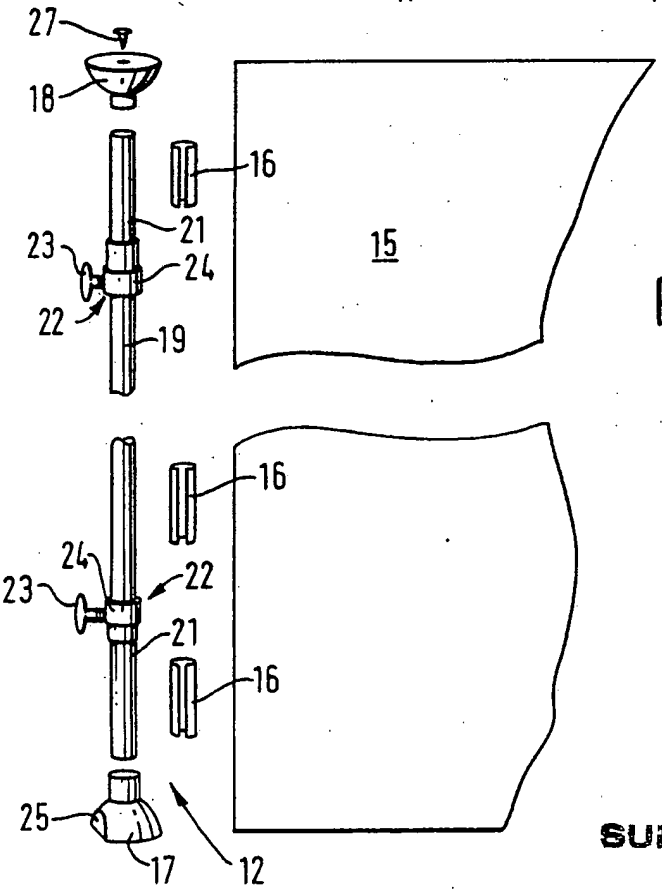
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FIG. 2

INTERNATIONAL SEARCH REPORT

International Application No PCT/GB 91/00009

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all)[8]

According to International Patent Classification (IPC) or to both National Classification and IPC

IPC5: A 47 G 5/00

II. FIELDS SEARCHED

Minimum Documentation Searched[7]

Classification System	Classification Symbols
IPC5	A 47 G; E 06 B

Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in Fields Searched[8]

III. DOCUMENTS CONSIDERED TO BE RELEVANT[9]

Category *	Citation of Document,[11] with indication, where appropriate, of the relevant passages[12]	Relevant to Claim No.[13]
X	FR, A1, 2594480 (FARNIER ET PENIN) 21 August 1987, see the whole document	1-3
A	DE, C, 120481 (OTTO WILHELM SJÖSTEN) 16 May 1900, see the whole document	1-11
A	DE, A1, 2461313 (SCHAFFER GEB. BAUMANN) 1 July 1976, see the whole document	1-11

* Special categories of cited documents: [10]

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

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"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step

"Y" document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

IV. CERTIFICATION

Date of the Actual Completion of the International Search	Date of Mailing of this International Search Report
5th April 1991	19. 04. 91
International Searching Authority	**Signature of Authorized Officer**
EUROPEAN PATENT OFFICE	miss T. MORTENSEN

ANNEX TO THE INTERNATIONAL SEARCH REPORT ON INTERNATIONAL PATENT APPLICATION NO. PCT/GB 91/00009

SA 43392

This annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report. The members are as contained in the European Patent Office EDP file on 28/02/91 The European Patent office is in no way liable for theseparticulars which are merely given for the purpose of information.

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR-A1- 2594480	21/08/87	NONE	
DE-C- 120481	16/05/00	NONE	
DE-A1- 2461313	01/07/76	NONE	
CH-A- 277237	16/11/51	NONE	

For more details about this annex : see Official Journal of the European patent Office, No. 12/82

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